NATURAL

Natural Glossary

software AG

This document applies to Natural Version 3.1.6 for Mainframes, Version 5.1.1 for Windows, Version 5.1.1 for UNIX and OpenVMS, Predict Version 4.2.1 and to all subsequent releases. Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Table of Contents

A

Abstract

Predict: Each object in Predict can have an abstract providing short comments on the object. An abstract can have up to 16 lines of up to 30 characters.
In earlier versions of Predict, an abstract was referred to as Comments or Short comments. The name was changed for reasons of compatibility with other Software AG products.

Active help

Predict: If parameter values needed to execute a function are missing, active help is given in the form of a selection window containing all possible values. This applies to all input fields marked with an asterisk.

Active reference data

Predict: See Xref Data.

Active retrieval

Predict: Active retrieval functions retrieve information from Xref data and from Predict documentation objects. Comparison of documentation and implementation of a system is possible.

ActiveX component

Windows: Standardized Microsoft interface to external programming components, for example, business logic or calculations. ActiveX components have no user interface.

ActiveX control

Windows: A standardized programming component with a user interface e.g. radio buttons or list boxes, which can be used in Natural dialogs. Natural can get a selection list of the ActiveX controls available from the registry. You can view the default settings in the Property pages using the Component Browser.

Adabas

Software AG’s high-performance, multi-threaded,adaptable database management system for multiple platforms.

Address space

Area in which Natural runs.

AIV = application-independent variable

1. A Natural system command which lists all active AIVs. See system command AIV.
2. A Natural variable used to assign values across programs and libraries. See the section User-Defined Variables in the Natural Reference documentation and the DEFINE DATA statement in the Natural Statements documentation.

ALF=access layer format

Predict: Represents a predefined, database system independent format with which you can exchange data between Predict Case and Natural Engineering Workbench. All the data you wish to transfer with the Predict Coordinator must first be put in a transfer medium.

AMODE = addressing mode

The number of bits (24 or 31) of a virtual address used during program execution.

Application

A logical view of a collection of interconnected programming elements. Together, they form a functional unit which covers the business logic for a particular business problem. An application consists of a set of libraries and their Natural objects and/or sub-applications (business objects). The contents of a library (Natural objects, resources, etc.) can belong to different applications. Information concerning an application (the application description) is held in the development server file which is accessible from all platforms.

There are two types of application:

- *base applications* consist of one application on one platform, for example, a theater ticket booking system.
- *compound applications* consist of multiple base applications, for example, a theater administration application combining applications for booking tickets, billing customers and mailing customers with performance information. The base applications can be on multiple platforms.

Application description

A list of all the elements belonging to an application, stored in the development server file. The Database file (at present FDIC on the mainframe) in which application information is physically stored. See Development server file.

Application description layer

The code which handles access to the application description.

Application wizard

Windows: A tool for defining what belongs to a certain application. Dialog boxes guide the user through creating an application description for an existing application.

Application workspace

Windows: Used to view a visual representation of an application in a tree view. The application workspace shows all elements belonging to the current application.

ASM = Authorized Services Manager

Provides the following authorized operating system functions for use within Natural:

- propagating Natural buffer pool objects;
- writing system management facility (SMF) records;
- holding Natural session information in the Session Information Pool (SIP).

ASM provides functions via PC routines and runs in its own address space.

Association

Predict: Predict documentation objects can be linked using associations. Different types of associations are used to link objects of different types. Associations are unidirectional (child and parent association).

Additional association types can be defined by the data dictionary administrator using the Metadata Administration functions of Predict.

Asterisk notation

Predict: The wildcard character * (an asterisk) can be used to specify input parameters that address groups of values. For example, if datab* is entered as an ID, all IDs starting with the characters datab are addressed.

Attribute

Predict: Predict documentation objects have attributes describing the object. All attributes of specific object types are described in detail in the respective sections of the Predefined Object Types in Predict documentation.

Automation object

Windows: A program which can be used via an automation interface. For further information, see your Microsoft documentation.

B

Base Application

See Application.

BMP = batch message processing

IMS/TM: Programs running asynchronously in batch mode under control of IMS/TM.

Bootstrap Module

A module used to call a program. The bootstrap module provides the environment needed to run the program.

BT = BACKOUT TRANSACTION

A Natural statement issued to cancel a database transaction and restore the condition of the data before starting the transaction. See also Transaction and END TRANSACTION (ET).

Buffer Pool

In Natural, this is a storage area used by the Natural nucleus to execute Natural objects (see also object types). When a Natural object is requested for execution, it is read from the system file and placed in the buffer pool, where it can be used by several users simultaneously.

Mainframe: See also the topic Buffer Pool Cache in the Natural Turbo Performance Plug-In documentation. .

C

Cache

A buffer area used to temporarily store copies of data most recently retrieved from the main memory. This avoids unnecessary access to system files and external databases/file systems thus reducing CPU time consumption and speeding up response time.

Mainframe: See also the topic Buffer Pool Cache in the Natural Turbo Performance Plug-In documentation.

CF = coupling facility

OS/390: Hardware component used to control and coordinate access to data shared by the operating systems participating in a Sysplex environment. The CF is used by the Authorized Services Manager (ASM) and the Roll Server to communicate in a Sysplex environment.

CGI = Common Gateway Interface

Used by Natural Web Interface to provide Internet services in Natural.

Child

Predict: Associations are used to document how Predict objects are related to other Predict objects. An association is established by linking objects to an object either as child or parent. For example, a field is the child of a file; a file is the child of a database.

CICS = Customer Information Control System

OS/390 and VSE/ESA: IBM's online transaction processing system.

CICSplex = CICS complex

A set of interconnected CICS regions acting as resource managers, and combining to provide a set of coherent services for a customer's business needs.*

Class

Natural classes encapsulate data structures (objects) with corresponding functionality (methods).

The internal structure of the objects of a class object is defined with a data area (object data area). The methods of a class are implemented as subprograms.

Class Builder

Windows: Supports the definition and implementation of NaturalX and DCOM component classes as Natural classes. A Natural class can be composed of various components: Natural objects (for example, an object data area) or objects which exist only in the class source (for example, interface components).
The Class Builder represents each component of the class in the form of a node. By selecting these nodes, the class and its components can be managed in a context-sensitive manner. See Class Builder in your User's Guide for Windows.

Class Name

The name defined in the *class-name* operand in the DEFINE CLASS statement. This name is used in the CREATE OBJECT statement to create objects of that class. See also DEFINE CLASS in the Natural Statements documentation.

Class Module Name

The name of the Natural module in which a Natural class is defined.

Client Stub

See RPC stub.

Cluster

VSAM: A dataset defined to VSAM. A cluster can be a key-sequenced dataset (KSDS), an entry-sequenced dataset (ESDS), or a relative-record dataset (RRDS).*

CMS = Conversational Monitor System

VM: A virtual machine operating system that provides general interactive time sharing, problem solving, and program development capabilities, and operates only under control of the VM control program.*

COM = Component Object Model

Microsoft's framework for developing and supporting program component objects. Microsoft provides the base technology for COM on the NT platform. Software AG has ported this to MVS and UNIX. COM provides a set of interfaces allowing clients and servers to communicate within the same computer. Components from different machines can be combined using DCOM.

Compiler

The Natural compiler translates source programs into pseudo-code. See also Natural Optimizer Compiler.

Com-plete

Software AG's general-purpose, fully conversational online transaction processing (OLTP) software.

Compound Application

See Application.

Component Browser

Windows: Used to view ActiveX components which are available for developing NaturalX applications. It comprises the following features:

- Available ActiveX components and their dispatch and dual interfaces are listed.
- Data types are mapped to Natural formats.
- The external components' help files are directly accessible.
- Natural programming examples are automatically generated.

Conceptual File

*Predict:*File objects of type Conceptual are used for design purposes in the early phases of application development.

Configuration Files

Open Systems: The base directory for FNAT/FUSER is found by looking into the following configuration files:

- *Local Configuration File - Natural.INI* : The local configuration file contains Buffer Pool Assignments and Installation Assignments. It is located in the appropriate "etc" directory for each installed Natural version.
- *Global Configuration File - NATCONF.CFG*: The global configuration file contains DBMS Assignments, Dictionary Server Assignments, Assignments of Printer Profiles, and System File Assignments.

For further information, see the topic Configuration Files under Operations Environment in your Natural Operations documentation.

Conflict Management

Predict: First phase of the Coordinator Check Cycle. With Predict Version 3.3 and above, all objects have an Internal ID. Conflict Management means the resolution of conflicts resulting from this Internal ID. A possible conflict could be two objects with the same object ID but different Internal IDs.

Conflicts resulting from the Internal ID must be resolved in the Coordinator FDIC before data can be loaded or imported to the Main FDIC.

Con-form

A text formatter which is automatically installed with the mainframe version of Con-nect.

Con-nect

Software AG's office communication system that provides a wide variety of office support functions including electronic mail, text processing, document and time management.

Connection

Predict: A connection between an external and a documentation object is established when either the external object has been generated from the documentation object or the documentation object has been incorporated from the external object. Most connected external and documentation objects can be disconnected explicitly.

The connection is realized on the Predict side with the implementation pointer, an attribute of documentation objects.

Consistency Check

Predict: Third phase of the Coordinator Check Cycle. Objects to be transferred are checked for logical consistency, for example that a file number only occurs once within a database. The same checks are performed as in Maintenance functions.

Constants

Natural supports the following types of constants:

- Numeric Constants
- Alphanumeric Constants
- Date and Time Constants
- Hexadecimal Constants
- Logical Constants
- Floating Point Constants
- Handle Constants

See the topic Constants in the Natural Statements documentation.

Coordinator Check Cycle

Predict: When objects are loaded or imported using the Predict Coordinator, they have to pass a check cycle consisting of the following phases: Conflict Management, Security and Consistency Check. Conflicts in either of the phases must be resolved on the Main or Coordinator FDIC before the Load or Import function can continue.

Coordinator FDIC

Predict: The Coordinator FDIC is a Predict file which is used to store data temporarily when using the Coordinator functions Load or Import. Conflicts must be resolved on this Coordinator FDIC before the load/import operation can be continued. The data on the Coordinator FDIC is deleted after the function has been successfully executed.

Coupled Field

Predict: Fields that are copied from fields in standard files or master files are called coupled fields. See the topic Rippling in the section File of the Predefined Object Types in Predict documentation.

Cross Reference List

Predict: A listing produced by Predict function X in the Retrieval and Active Retrieval menu showing all objects to which a given object is linked by an association.

CSA = Common System Area/Common Storage Area

1. *CICS:* A common system area is a major CICS storage control block that contains areas and data required for the operation of CICS. * See also ECSA.
2. *OS/390:* A common storage area which is available to all address spaces in OS/390.

CSECT = Control Section

That part of a program specified by the programmer to be a relocatable unit, all elements of which are to be loaded into adjoining main storage locations.*

CSV = Comma-Separated Values

Files with statistical tables are stored in CSV format to delimiter columns for spreadsheet manipulation.

CUI = Character User Interface

Current Objects

Predict: Some retrieval types (for example: files with children) report on both the attributes of objects that meet the specified selection criteria and the attributes of objects that are related to these objects. When specifying output options, the objects that meet the specified selection criteria are called the current objects.

Current Virtual Machine/Current Network

Predict: Network and virtual machine objects document the hardware and operating system environment of an information processing system. Predict stores a current virtual machine and a current network which is then used

- as default parent for databases and virtual machine objects
- as the target environment for Generate/ Incorporate/Compare functions and some AOS functions called from the Predict Special functions menu.

Current virtual machine and current network are specified in the Predict Defaults. See the section Defaults in the Predict Administration documentation.

D

Database

Predict: Predict documentation objects of type database document a collection of physical and/or logical files. The way files are collected to form an object of type database depends on the type of database documented.

Dataspace

Predict: Predict documentation objects of type dataspace document DB2 tablespaces and SQL/DS DBspaces.

Data control language (DCL)

See DCL.

Data definition object

Predict: External objects created with generation functions, for example definitions for the Adabas compression utility, COBOL copy code, data definition modules (DDMs), DB2 databases, verification rules.

See the section Generation in the External Objects in Predict documentation for a complete list of external objects that can be generated.

Data definition language

See DDL.

Data definition module (DDM)

See DDM.

Data dictionary object

Predict: See Object.

DB = Database

DBA = Database administrator

DBCS = Double-byte character set

A character set where each character is represented by two bytes. This set is typically used to represent symbols of languages (for example, Chinese and Japanese) which need more codes than available with single-byte character sets (SBCS).

DBD = database description

DL/1: A description of the physical characteristics of a DL/I database. It defines the structure, segment keys, physical organization, names, access method, devices and other details of the database.*

DBID = database identification

The database number.

DB2 = DATABASE 2

A relational database management system in which data is presented to the user in the form of tables. It can be accessed by a CICS application programs issuing SQL requests.*

DCL = data control language /DIGITAL Command Language

SQL: Data control language handles data security aspects by providing statements for granting and revoking privileges.

Open VMS: DIGITAL Command Language (trademark of the COMPAC Computer Corporation) handles operating system instructions in Open VMS environments.

DCOM = distributed component object model

A component technology invented by Microsoft which allows objects on different computers to communicate through common protocols, including Internet and Web-based protocols. DCOM extends COM to a distributed component software model which specifies how software components interact in a distributed environment.

With EntireX DCOM and NaturalX, Software AG has made the DCOM technology available on UNIX and mainframe platforms.

DCSS = discontiguous shared segment

CMS: An area of virtual storage outside the address range of a virtual machine. It can contain read-only data or reentrant code. It connects discontiguous segments to a virtual machine's address space so programs can be fetched.*

DDL = data definition language

Used to create, modify and delete SQL data structures.

DDM = data definition module

A logical definition of a physical database file referenced by Natural programming objects. DDMs contain information on the individual fields of the file relevant for their use within programming objects. On the mainframe, DDMs are stored in FDIC and under open systems they are stored in FUSER in the relevant library. For information on DDM structure, see the section Database Access in the Natural Programming Guide.

Mainframe: See the topic Natural SYSDDM utility in the Natural Utilities for Mainframes documentation.

Windows: See the section DDM Editor in the User's Guide.

UNIX/Open VMS: See the section DDM Services in the User's Guide.

Predict: See the sections Data Definition Module (in Generation of External Objects,)and Incorporating Natural DDMs, both under External Objects in the Predict documentation.

Debugger

See Natural Debugger.

Development server file

Database file (at present FDIC on the mainframe) in which application descriptions are physically stored. See Application description.

DIGITAL command language (DCL)

See DCL.

Distributed component object model (DCOM)

See DCOM.

DL/I = Data Language/One

An access method to manipulate hierarchical databases.

DLL = dynamic link library

DML = data manipulation language

A language used to manipulate SQL data structures.

DSECT = dummy control section

DTD = document type definition

Schema specification method for SGML and XML documents. DTDs are either contained in the document or belong to its external subset and are then referenced from within the document's document type declaration per URL. Known DTDs are e.g. DocBook, CML, IBTWSH, and HTML. dtd2html generates HTML documentation for SGML DTDs. For XML, DTDs will be replaced by the new XML Schema specification method.

Dynamic definition

Any definition of Natural variables that is not part of a DEFINE DATA clause.

Dynamic parameter

Assigned by specifying individual parameters and/or an alternative parameter file when starting Natural. Valid for the current Natural session.

Dynamic variable

Open Systems: Using variables with the attribute DYNAMIC, large binary and alphanumeric data structures may be processed in Natural without the need to define a space limit at development time. Dynamic variables are defined without any length. Memory is allocated at execution time either implicitly, when the dynamic variable is used as a target operand or explicitly with an EXPAND statement. Dynamic variables can only be defined in a DEFINE DATA statement. See the topic Large and Dynamic Variables in your Installation and Operations documentation. GoTo

E

ECSA = Extended Common System Area

OS/390: A major element of OS/390 virtual storage above the 16MB line. This area contains pageable system data areas that are addressable by all active virtual storage access spaces. It duplicates the common system area (CSA) which exists below the 16MB line.*

EDIT Line

Predict: The bottom line in the input screen of the functions Add, Copy and Modify. This line determines whether certain attributes are to be created or modified. If Y is entered in input fields in the EDIT line, a Predict editor is called.

Elementary Field

Predict: See Field. In previous versions of Predict, the Predict object type Field was called Elementary Field.

ELPA = Extended Link Pack Area

OS/390: A major element of OS/390 virtual storage above the 16 MB line. It duplicates the link pack area (LPA).*

Endian Mode

Open Systems: Type of architecture for which the compiler generates GPs. There are two modes:

- **big-endian**: the high-order byte of the number is stored in memory at the lowest address, and the low-order byte at the highest address (the big end comes first).
- **little-endian**: the low-order byte of the number is stored in memory at the lowest address, and the high-order byte at the highest address (the little end comes first).

Determined by the ENDIAN session/profile parameter. The ENDIAN parameter is used to increase the execution performance of portable GPs.

Entire Broker

Software AG’s middleware technology which addresses vital software communication issues involved in business process reengineering and achieving open enterprise computing. The follow-up technology is EntireX.

Entire Connection

Software AG product for handling host-to-PC communication. Entire Connection provides mainframe terminal emulation, a high-level application program interface, unattended workstation operation, data conversion facilities and related communication tasks.

Entire DB Engine

Software AG’s entity relationship database that is based on Adabas.

Entire Net-Work

Software AG’s middleware which provides a common communications service for database applications, query tools, cooperative processing applications, application development tools and other software.

Entire Operations

Software AG's online control and scheduling system for the automatic preparation, handling, monitoring and logging of batch processing in the computer center.

Entire Output Management

Software AG product for processing any type of print data in heterogeneous client/server environments without changing the applications or programs that created the data.

Entire System Server

Software AG's self-contained software package that provides operating system services in a Natural environment. When installed on computers that are linked by Entire Net-Work, Entire System Server supports distributed computing environments that can encompass heterogeneous operating systems.

Entire Transaction Propagator

Software AG product used to replicate database files. It allows Adabas users to have duplicate or replicate database files in a single database or distributed network.

EntireX

Software AG's middleware technology for open enterprise computing. It provides a powerful infrastructure to develop distributed applications, the components of which can be ported to a wide range of operating environments. EntireX enables you to integrate legacy applications (e.g. on the mainframe) and GUI-front-ends.

EntireX Broker stub

Interface between the Natural RPC runtime and the EntireX Broker transport layer which exchanges marshalled data between client and server.

EntireX DCOM

Software AG product used to develop DCOM components in a heterogeneous networking environment.

EntireX Manager

To be replaced by System Management Hub.

Entry-sequenced dataset (ESDS)

See ESDS.

ESDS = entry-sequenced dataset

VSAM: A dataset whose records are physically in the same order in which they were put in the dataset. It is processed by addressed direct access or addressed sequential access and has no index. New records are added at the end of the dataset.*

ET = END TRANSACTION

A Natural statement issued to confirm completion of a database transaction. See also Transaction and BACKOUT TRANSACTION (BT).

Event-driven programming

Windows: Event-driven programming allows an application to be driven by input received through the graphical user interface. Thus, the order in which code executes depends on which events occur, which in turn depends on what the user does. See the topic Introduction to Event-Driven Programming in the User's Guide.

Export

Predict: The Coordinator function Export is used to export Predict data in a form which allows data exchange with other systems. You can also export text from attributes of a Predict object (for example extended description or subquery of a File), or from the output of a display-oriented Predict function (for example Retrieval or Active Retrieval), to an external target (for example Natural, a Con-nect document or a PC ASCII file).

External Object

Predict: Objects of applications (data processing systems) that are documented in Predict with documentation objects. External objects can be generated from documentation objects with Generation functions and documentation objects can be created from external objects using Incorporate functions. Comparison functions compare external and documentation objects.

External Interface

Windows: An external interface is an interface which is defined in an interface module, that is included by the class.

Extract

Predict: An Extract is a predefined object type in Predict which fulfills two main functions:

- grouping objects logically
- creating a set of objects to be transferred with the Predict Coordinator.

F

FDIC

System file containing cross-reference information and DDMs. If Predict is installed at your site, FDIC is the Predict dictionary file. If Predict is not installed at your site, FDIC is identical to either FNAT or FUSER and on the mainframe contains DDMs only. Specified with the FDIC profile parameter as described in the Reference documentation.

FDICX

VSAM: Alternate index path for VSAM base cluster FDIC.

FDT = field definition table

Adabas: The table of field definitions of an Adabas file as stored and used by Adabas.

Field

Predict: Predict objects of type Field document the smallest logical unit of reference within a File.

Field definition table (FDT)

See FDT.

File

Predict: A Predict object of type File contains the definition of a collection of fields.

File Relation

Predict: A Predict object of type File Relation documents a logical or physical relationship between two Files which is established using Fields in the Files. In earlier versions of Predict, File Relations were called Relationships. The name was changed for reasons of consistency with other Software AG products.

FNAT

Natural system file in which Natural system objects and parameter profiles are stored. Specified with the FNAT profile parameter as described in the Reference documentation.

FNR = file number

Usually the file number of a Natural system file.

Front-end

Open Systems: Prepares screen and printer output.

Mainframe: See Front-end stub.

Front-end stub

OS/390: A component of the Natural Server environment used by NaturalX, the Natural DB2 Stored Procedures Server and the Natural Development Server. See Natural as a Server under OS/390. The front-end stub interacts between the client/server protocol and the Natural Server front-end.

FSEC

Natural Security system file.

FSEQ = file sequence

FSPOOL

Natural Advanced Facilities spool system file. See also system file.

FUSER

Natural system file in which all user-generated objects are stored. Specified with the FUSER profile parameter as described in the Reference documentation. See also system file.

G

GDA = global data area

A Natural object used to define data elements that are to be accessed by more than one Natural object in an application. See also Object Types.

Generation

Predict: External data definition objects can be generated from Predict File objects with generation functions. Generation functions are described in the section Generation in the External Objects in Predict documentation.

Generated Program (GP)

The executable program object generated by the compiler.

Mainframe: executable on mainframe platforms only. On the mainframe it is also possible to optimize generated programs using the Natural Optimizer Compiler.

Open Systems: the Portable GP introduced with Natural 5.1 for Windows is executable on all open systems platforms supported by Natural (not on the mainframe). It is also still possible to generate operating-system-dependent GPs if required.

Synonyms: The term ’object’ is often used synonymously to GP. In Predict Application Control, the term ’loadable’ is used.

Generation Task

Predict: The generation of data definition objects can be performed comfortably by including several generation tasks in an implementation plan. A generation task is the call of a Predict generation function. See the section File Implementation in the External Objects in Predict documentation.

Global parameter

See Session parameter.

GP = generated program

GUI = graphical user interface

GUID =globally unique identifier

DCOM uses globally unique identifiers (GUIDs) - 128-bit integers that are virtually guaranteed to be unique throughout the world - to identify every interface and every class. This helps to ensure that server components can be located and to prevent clients connecting to an object accidentally.

If a class is to be registered to DCOM, every interface defined in a Natural class and the class itself must be associated with such a globally unique ID.

Once a globally unique ID has been assigned to an interface or a class, the ID must never be changed.

H

HF = Hierarchical File System

UNIX file system available with OS/390 UNIX services.

HTML = Hypertext Markup Language

HTTP = Hypertext Transfer Protocol

HTTP Cookies

Provide the server with a mechanism to store and retrieve state information on the client application's system. This mechanism allows Web-based applications to store information about selected items, user preferences, registration information, and other information that can be retrieved later. Used in the REQUEST DOCUMENT statement. For further information, see the section REQUEST DOCUMENT in your Natural Statements documentation.

I

ID = identifier

Predict: With one exception, Predict objects are uniquely identified by two attributes: Object type and ID. Objects of different types can therefore have the same ID.

Field objects are uniquely identified by three attributes: Object type, ID of the File to which they belong, and ID of the field itself. Field objects in different Files can therefore have the same ID.

IIS = Internet Information Server (Microsoft)

Import

Predict: The Coordinator function Import is used to import data from a transfer medium to a Predict environment. You can also import text from various external sources, such as Natural, a PC ASCII file or a Con-nect document, to a text attribute of a Predict object, for example the extended description of any Predict object, or the subquery of a File.

IMS = Information Management System

A database manager used by CICS to allow access to data in DL/I databases. IMS provides for the arrangement of data in a hierarchical structure and a common access approach in application programs that manipulate IMS databases.*

IMS/DB = Information Management System/Database

OS/390: A management system that provides access to DL/I databases to organize data in a hierarchical order and to access programs that modify IMS/DB databases.

IMS/DC = Information Management System/Data Communication

Obsolete. Replaced by IMS/TM.

IMS/TM = Information Management System/Transaction Manager

OS/390: Component of the online transaction processing system from IBM.

IMS/VS = Information Management System/Virtual Storage

A database/data communication (DB/DC) system that can manage complex databases and networks.*

Incorporation

Predict: Predict data dictionary objects can be created by incorporating external objects (for example, an existing Natural data definition module or Adabas field definition table).

INPL = initial Natural program load

Natural utility used to load or scan Natural modules or DDMs from Software AG datasets (for example Natural INPL tapes) from Work File 1. In addition, it provides a Natural Security Recover function that enables you to force an initialization of the Natural Security environment.

Interface module

A Natural copycode module which defines interfaces. The interface module can be used in a class to define the contained interfaces. The class can overwrite the method and property implementations, but all other settings of the interface are used as defined in the Interface Module.

Internal code

Predict: Each Predict object type is internally identified by an internal code. Internal codes are assigned by Predict and cannot be changed by the user.

Internal ID

Predict: As of Predict Version 3.3, all objects have an internal ID. This ID is allocated automatically when an object is added. It is unique worldwide and remains with the object throughout its entire lifespan.

Internal interface

An interface which is defined directly in the class, or an interface of an interface module, which is defined in the interface module.

I/O buffer = input/output buffer

An area that contains the most frequently used data and data relationships. It helps to minimize physical input/output activity, thus saving computer time.

IOCB = input/output control block

IPL = initial program load

The procedure which initializes the loading of an operating system.

ISAPI = Internet Server Application Programming Interface

Used by Natural Web Interface to provide Internet services in Natural.

ISN = internal sequence number

A unique identifier for variable-length records stored in an Adabas database file. Each ISN is assigned a relative Adabas block number (RABN) in which the record is physically stored.

Isolated database

Predict: Database that cannot be accessed using Adabas Star.

IUPD = INPL update

Contains fixes for an INPL.

J

JCL = Job Control Language

OS/390 and VSE/ESA operating systems: Control language used to describe a job and its requirements to an operating system.*

Jobs are needed for installing and maintaining Natural and executing Natural in batch mode.

JCS = Job Control Statement

VSE/ESA operating systems: Statement of the job control language (JCL).

JES = Job Entry Subsystem

OS/390: An IBM licensed program that receives jobs into the system and processes all output data produced by the jobs.*

Job

A unit of work defined by a user that is to be accomplished by a computer. Loosely, the term job is sometimes used to refer to a representation of a job. This representation may include a set of computer programs, files, and control statements to the operating system.*

K

Keyword

Natural: See Keywords/Reserved Words in the Natural Reference Manual.

Predict: Objects of type keyword are used as an additional means of reference to data dictionary objects. Up to 32 keywords may be assigned to any given object.

KSDS = Key-Sequenced Dataset

A VSAM file whose records are loaded in key sequence and controlled by an index.*

L

Label

A Natural statement can be marked by placing a label in front of it. A label is an arbitrary name. A statement which is marked with a label can be referenced at another point in the program by specifying its label.

Large variable

Open Systems: Large variables for alpha and binary data are based on the well known Natural formats A and B. The limitations of 253 for format A and 126 for format B are no longer in effect. The new size limit is 1 GB. These large static variables and fields are handled in the same manner as traditional alpha and binary variables and fields with regard to definition, redefinition, value space allocation, conversions, referencing in statements, etc. All rules concerning alpha and binary formats apply to these large formats.

See the topic Large and Dynamic Variables in your Installation and Operations documentation. GoTo

LDA = local data area

A Natural object used to define local data elements that are to be accessed by a Natural module in an application. See also Object Types.

Library structure

Predict: Predict objects of type library structure contain system objects documenting the Natural steplib structure.

Link

Predict: Predict documentation objects can be linked using associations (see Association).

Load

Predict: Loads Migrate data from the Coordinator FDIC. Data to be loaded must pass through all three phases of the Coordinator Check Cycle.

Logical file

Predict: A logical file definition does not necessarily contain information on the physical implementation of the file. A logical file definition is basically the definition of the file structure.

LPA = link pack area

OS/390 operating systems: A major element of OS/390 virtual storage below the 16MB line. The storage areas that make up the LPA contain all the common reentrant modules shared by the system. The LPA provides economy of real storage by sharing one copy of the modules, protection because LPA code cannot be overwritten even by key 0 programs, and reduced path length because the modules can be branched to. The LPA is duplicated above the 16MB line as the extended link pack area (ELPA).*

LU = Logical unit

The underlying network entity that provides access to the Systems Network Architecture (SNA) network for the user.

M

Main FDIC

Predict: The Main FDIC is the target environment of a Load or Import operation using the Predict Coordinator.

Mainframe

Refers to the IBM operating systems OS/390 (to include previous MVS/ESA versions), VSE/ESA, VM/CMS and BS2000/OSD, as well as all TP monitors supported by Natural under these operating systems.

Map

A screen layout referenced in a program. A map provides formatting instructions for screen layouts referenced in a program. It defines input and output fields and assigns them program variables. Natural objects of the type map are created with the map editor as described in your Natural User's Guide.

Mapping

Windows Single Point of Development: In a remote development context, you can map a development server to your Windows session and then map applications. For further information, the section Application Workspace in the Remote Development documentation and the description of the MAP command in the section System Commands in the Reference documentation. GoTo

Master field

Predict: Field in a master file.

Master file

Predict: A file from which a view has been created. A master file is at the intermediate level of the data hierarchy within Predict: its fields can inherit attributes from standard fields, and attribute values in a master field are rippled to lower-level views and userviews.

Member

Predict: Natural or third generation language object for which Xref data exists.

Metadata structure

Predict: The Predict data dictionary structure consists of object types, their attributes and association types. This structure can be enlarged by defining new object types and association types using Predict's Metadata Administration functions. Predict's predefined object types cannot be modified.

See Metadata Administration in the Predict Administration documentation.

Method

Object-oriented programming: A method is a function that an object/instance of a class can perform when requested by a client.

Method implementation

A method implementation is a Natural subprogram which is assigned to the method and executed when this method is called for a class object.

MPP = message processing program

1. A program that processes or otherwise responds to messages received from terminals.
2. In IMS/VS, an application program that is driven by transactions and has access to online IMS/VS databases and message queues.*

Multiple-master view

Predict: A view which can be derived from one or more master files, for example ORACLE view.

N

NATPARM

The parameter file (Open Systems) /parameter module (mainframe) which contains all the profile parameter settings for Natural. Natural cannot run without this file. NATPARM initially contains the system defaults supplied by Software AG. If you want to use Natural with parameter values other than the system defaults, you can modify NATPARM and/or create your own parameter files/modules.

Mainframe: NATPARM is a load module delivered in source form. It must be assembled and linked to the nucleus and/or to the front-end module. See the topic Configuring Natural in your Natural Operations documentation.

Windows: NATPARM is a binary file which you can edit using the Natural Configuration Utility.

UNIX/Open VMS: NATPARM is a binary file which you can edit using the NATPARM utility. See the topic NATPARM Utility under Profile Parameters in your Natural Operations documentation.

Natural Advanced Facilities

Natural Advanced Facilities consists of NATSPOOL, the spooling and report management system which permits Natural program output to be spooled and subsequently routed to physical printers.

Natural Command Processor (NCP)

Consists of two components: maintenance and runtime. The SYSNCP utility, as described in the Natural cross-platform documentation, is the maintenance part which comprises all facilities used to define and control navigation within an application. The PROCESS COMMAND statement (see the Natural Statements documentation) is the runtime part used to invoke Natural programs.

Natural Configuration Utility

Windows: You use the Natural Configuration Utility to maintain the following:

- Global and local configuration files
- Natural parameter files

For further information, see the topic Creating Parameter Files under Profile Parameter Usage in your Natural Operations documentation. .

Natural Construct

An application generator which provides a variety of highly flexible application structure templates. It automates many aspects of Natural software production and can be used by IT-experts and IT non-experts alike.

Natural Construct Spectrum

Provides access to mainframe Natural from Windows. Using Natural Construct Spectrum and the software development kit (SDK), application developers can create all the components of a client/server and web application, including Natural object subprograms that perform maintenance and browse functions, and GUI dialogs or web pages that communicate with these Natural object subprograms. Communication between server and client components of an application is performed by a combination of Entire Broker and Entire Net-Work (or Entire Broker configured to use TCP/IP), as well as Construct SpectrumŸs middleware components.

Natural Debugger

Open Systems: The Natural Debugger enables you to:

- temporarily control or influence the program flow of a Natural application by modifying variables,
- check the program flow through a calls history,
- detect logical application errors in a Natural program by checking the contents of its variables using breakpoints or conditions for program interruption;
- permanently watch variables.

The Debugger helps you to understand programs written by other people more easily, develop your own applications more quickly and better understand the logic of Natural if you are a first-time user.

For further information, see your Natural Debugger Manual.

Natural Development Server

Enables the Natural Studio development environment to be mapped onto a remote Natural environment. You can then develop and test Natural applications in remote environments without leaving the common work-area of Natural Studio. At present, Natural Development Server is available on mainframes. Development servers for other platforms and operating systems are planned.

The Natural Development Server is documented in the Single Point of Development documentation.

Natural Engineer

Mainframe and Windows: Tool for checking Natural code, maintaining it and ensuring its compliance to defined requirements. Enables you to reengineer and maintain Natural applications into the future, applying standards, maintaining flexibility and preparing for the adoption of new technologies.

Natural ISPF (Integrated Structured Programming Facility)

Natural ISPF is Software AG's application development tool for building, testing and maintaining applications throughout their life cycle.

Natural Object Handler

Open Systems: Processes objects for distribution of applications. This is done by unloading the objects in the source environment into work files and loading them from work files into the target environment. The Natural Object Handler consists of the utility SYSOBJH which is located in the library SYSOBJH, and the direct command interface. For further information, see the section Natural Object Handler - General Information in the Natural Transfer Applications (SYSOBJH)/SYSOBJH Utility documentation.

Natural Optimizer Compiler

Mainframe: A Natural compiler which generates machine code wherever possible (otherwise it generates pseudo code). See your Natural Optimizer Compiler documentation.

Natural RPC (Remote Procedure Call)

Implements RPC techniques in a Natural environment. Natural RPC enables Natural to call Natural subprograms, applications, procedures and object methods on a remote computer through a network via EntireX Broker. The client sends a request to the server which provides the service. Request transmission is executed through client and server stubs.

The connections between client, server and services are configured for each Natural client using the Natural utility SYSRPC.

For further information, see the Natural Remote Procedure Call documentation in the documentation collection for all platforms.

Natural Runtime

1. The product Natural Runtime provides the environment necessary for executing Natural applications.
2. The virtual machine which interprets Natural code.

Natural Security

A comprehensive security system which enables you to control, check or prevent access to your Natural environment.

For further information, see the Natural Security documentation.

Natural Studio

Windows: Natural's GUI development environment. Natural Studio integrates the previously separate editors and tools into one easy-to-use work area.

See the topics Introduction to Natural Studio and Natural Studio in the User's Guide.

Natural Web Interface

Natural Web Interface offers comfortable web enabling of existing Natural applications. Natural Web Interface is a link between a Web Server (HTTP server) and your Natural environment. This can be on a separate server machine (such as a mainframe) or on the same machine as the HTTP server (e.g. Netscape's Communication Server or Microsoft's IIS).

Natural Web adaptor server extensions

Part of Natural Web Interface, the implementations of various server interfaces such as CGI, ISAPI and NSAPI.

NaturalX

Allows applications to be transformed into DCOM-compliant components. Used for writing and distributing object-based Natural applications using distributed object technology (currently DCOM). Not available under Open VMS.

For further information, see the NaturalX documentation.

Network

Predict: Together with Predict objects of type virtual machine, networks document the hardware and operating system environment of a data processing system.

Node

Predict: Predict objects of type node are used together with objects of type server to document remote procedure calls.

Node Name

Natural RPC: The name of the node to which the remote CALLNAT is sent. With EntireX Broker, the node name is the name of the EntireX Broker as defined in the EntireX Broker attribute file in the field BROKER-ID. See also Natural RPC.

NSAPI = Netscape Application Programming Interface

Used by Natural Web Interface to provide Internet services in Natural.

Nucleus

A collection of service programs such as memory administration, string handling, operating system interfaces, the compiler and the runtime environment which comprise the kernel of Natural.

Mainframe: The nucleus is independent of the operating-system and the TP system. See also shared nucleus.

Open Systems: The nucleus is the only part of Natural which is operating-system-dependent.

O

Object

Object-oriented programming: In the object-oriented programming model, data structures and functions (methods) are packaged together in objects. Each object belongs to a class that describes the internal structure of the object, its interfaces, properties and methods.

Predict: Information in Predict is stored in the form of the following objects: data dictionary object, documentation object, Predict object. Data dictionary objects are also called Predict objects or documentation objects.

See also Object Types.

Object data variable

Object-oriented programming: Each property needs a variable in the object data area of the class to store its value - this is referred to as the object data variable.

ODA = object data area

Object-oriented programming: Where the current values of all properties of an object are stored. Other variables which are not accessible by clients as properties can also be defined in the object data area. These variables are used by the methods of the object to maintain an internal state of the object. The structure of the object data area of all objects of one class is specified in the OBJECT USING clause in the DEFINE CLASS statement. An object data is created in the data area editor as a local data area.

Object locking

Windows: Prevents concurrent updating of programs in a remote development environment. For further information, see the topic Object Locking in your Remote Development documentation.

Object types

Natural: The following are examples of Natural object types: program, map, copycode, text, subprogram, helproutine, subroutine, class, data areas (global, local, parameter), dialog. For further information, see the topic Object Types in the Natural Programming Guide.

Predict: Information in Predict is stored in the form of the following objects: data dictionary object, documentation object, Predict object. Data dictionary objects are also called Predict objects or documentation objects. Predict documentation objects are of a certain type, for example database or program. Additional object types can be defined using the Metadata Administration functions of Predict. Each object type has its own type-specific attributes.

Object type code

Predict: Each type of object within the Predict metastructure is identified by a unique object type code. An object type code consists of two letters (for example FI for file).

Open Systems

The Windows, Open VMS and UNIX versions/platforms supported by Natural.

OpenUTM = Open Universal Transaction Monitor

BS2000/OSD operating systems: Teleprocessing access method for online environments.

Output mode

Predict: The Output mode - together with the Retrieval Type - determines how dictionary data is evaluated by Predict retrieval functions. Note that not all output modes are available for all retrieval types.

Owner

Predict: An owner is basically a group of one ore more users. An owner can represent an organizational unit, for example. Responsibilities can be documented in Predict by assigning an owner to the owner list of a user and the same owner to the owner list of an object.

P

Packagelist

Predict: Predict objects of type packagelist document DB2 packages.

Parameter

See the following:

- Dynamic parameter
- NATPARM
- Natural Configuration Utility
- Parameter file
- Parameter module
- Printer profile
- Profile
- Profile parameter
- Profile parameter hierarchy
- SYSPARM utility
- Session parameter
- Static parameter

Natural Remote Procedure Call: All Natural RPC parameters are documented in the environment- specific Operations documentation.
For mainframe Natural, these parameters are included in the NTRPC macro (static definition) or are defined with the profile parameter RPC (dynamic definition).

Parameter file

Mainframe: See Parameter Module.

Open Systems: By default, the parameter specifications in the parameter file NATPARM.SAG are used to determine the characteristics of your Natural environment. Natural cannot run without a parameter file. Initially the NATPARM parameter file contains the default values supplied by Software AG. If you want to use Natural with parameter values other than the system defaults, you can modify the default parameter file NATPARM.SAG and/or create your own parameter files using the Natural Configuration Utility. All parameter files must have names of 8 characters and the extension .SAG.

Parameter module

Open Systems: See Parameter file.

Mainframe: Contains all the profile parameter settings for Natural used to determine the characteristics of your Natural environment. Natural cannot run without a parameter module. The default parameter module supplied by Software AG is NATPARM which is delivered in source form. Natural parameter modules are load modules which must be assembled and linked. If you want to use Natural with parameter values other than the system defaults, you can modify NATPARM and/or create your own parameter modules.

Natural parameters are defined in the standard parameter module which is linked to the Natural nucleus. This module constitutes the bottom-most level of the Natural parameter hierarchy. In addition to the Natural standard parameter module, the Natural administrator can define any number of additional parameter modules. Additional parameter modules are stored in a TP or operating-system library and can be used as an alternative parameter module by the parameter PARM when Natural is started. For further information, see the topic Using Profile Parameters in your Natural Operations documentation.

Parent

Predict: Associations are used to document how Predict objects are related to other Predict objects. An association is established by linking objects to an object either as child or parent. For example, a database is the parent of a file, a file is the parent of a field.

Passive cross references

Windows - XRef GUI Client: The passive cross reference function shows which objects use the current object. For example, if you have a copycode you might want to know in which parts of your application it is included. Results are displayed in a tree view with the referenced ("used") object at the top. There are some types of objects which by default only have passive cross references, such as copycodes, DDMs and methods.

For further information, see the topic Cross References in the section Invoking XRef GUI Client in the Remote Development documentation.

Passive help

Predict: Passive help provides descriptive information on functions. Context-sensitive online help information can be displayed by entering a question mark in the Retrieval Type/Function field of a menu, or from the Help Main Menu.

PCB = program communication block

DL/I or IMS control block that describes an application program’s interface to a DL/I or IMS database or, additionally, for message processing and batch message processing programs, to the source and destination of messages. See also program specification block (PSB).*

PDA = parameter data area

A Natural object used to define fields that are passed as parameters to a subprogram, external subroutine or helproutine. See also Object Types.

Periodic group

Contains a series of elementary and/or multiple-value fields which occurs more than once. A periodic group can have up to 99 occurrences.

Physical file

Predict: See Master File.

Placeholder

Predict: When an object that is linked to another object is loaded/imported, and the referenced object is not loaded/imported and does not exist in the target environment, a placeholder is added in the target environment for the referenced object. The purpose of this placeholder is to reserve the object ID of the referenced object in the target environment so that the link in the old environment can be recreated in the new environment at a later time.

A placeholder contains the following information:

- object ID
- internal ID
- subtype (if applicable)
- transfer status placeholder

PLOG = Protection log

Adabas: A file that records before-and-after images of records and other elements when changes are made to an Adabas database. Used to recover the database (up to the last completed transaction or ET) after restart.

Plug-In Manager

Windows: The Natural Studio user interface is extensible by plug-ins. Plug-ins can be activated and deactivated with the Plug-In Manager. Part of the Natural Studio functionality itself is delivered in the form of plug-ins. A sample plug-in is delivered in source code in the library SYSEXPLG. For further information about Natural Studio Plug-ins and the Plug-In Manager, see the section Plug-In Manager in the Natural User's Guide.

Portable GPs

Open Systems: GPs which are cataloged with Natural Version 5 are now portable across any Natural-supported UNIX, OpenVMS and Windows platform. This means that GPs which are cataloged with Natural Version 5 are now executable with Natural Version 5 on these platforms without recompilation. This feature simplifies the deployment of applications across open systems (UNIX, OpenVMS and Windows) platforms. Command processor GPs operate as before. See also Generated Programs.

Predict

Software AG's open, operational data dictionary for fourth generation development with Natural. It is a central repository of application metadata and provides documentation and cross-reference features. Predict lets you automatically generate code from definitions, enhancing development and maintenance productivity.

Predict Coordinator

Predict: Utility that enables data exchange between different FDIC files and between Predict and Natural Engineering Workbench. The Coordinator uses its own FDIC file called the Coordinator FDIC which serves as temporary storage. The application that contains the Coordinator functions is located in the Natural library SYSDICBE.

Printer profile

Open Systems: Profile information for printers is specified in the following file, which initially contains the printing defaults supplied by Software AG: Software AG/Natural/Etc/natconf.cfg.

Process

An operating system process is an element of work that has its own memory space, code, data, and other operating-system resources and which consists of one or more threads.

Processing rule

A processing procedure defined for a map field which checks the content of the field and reacts depending on that content. The check can also include several fields. Processing rules can be stored centrally in Predict (free rules) and/or be permanently assigned to DDM fields (automatic rules).

Profile

Mainframe: Using the utility SYSPARM, you can specify a string of profile parameters and store it under a profile name. To use a profile, start NATURAL with the dynamic parameter PROFILE=*profile-name*. The string of parameters stored under that profile name is passed to NATURAL as dynamic parameters. A profile in this context means a string of profile parameters stored under a profile name.

Profile parameter

All Natural parameters which are defined in NATPARM (not, for example, driver or front-end parameters). The Natural profile parameters define various characteristics of the Natural environment. Only Natural Administrators are authorized to set all profile parameters.

The values for these parameters are taken from the following three sources:

- Runtime assignment of session parameters using the Natural SET GLOBALS statement or the GLOBALS system command (highest priority).
- Dynamic assignments which are valid for the current Natural session. These are made by specifying individual parameters and/or an alternative parameter file when starting Natural.
- Static assignments, which are specified in the Natural module/parameter file NATPARM (lowest priority). On the mainframe, this is the parameter module linked to the Natural nucleus. Under Open Systems, this is the parameter file NATPARM.SAG.

For further information, see your Installation and Operations documentation.

Profile parameter hierarchy

Natural profile parameters are set at different hierarchically organized levels as illustrated in the table below (priority from high to low).

During Session (highest priority)	Development Environment Settings Program/Statement Level Settings Session Parameter Settings Natural Security Definitions
Dynamic during Session Start	Dynamic Parameter Entry Predefined User Parameter Profiles Predefined Dynamic Parameter Sets
Static	Alternative Parameter Module Natural Standard Parameter Module

Program

Predict: A Predict object of type program documents data processing objects of different types and languages.

Progam-driven application

Applications in which programs control the portions of code that execute - not an event. Execution starts with the first line of executable code and follows a defined pathway through the application, calling additional programs as instructed in the predetermined sequence.

Property

Attributes of an object that can be accessed by clients. In Natural classes, property values of an object are stored in the object data area. Therefore, an object data variable must be assigned to each property. For further information, see Object Data Variable.

Property implementation

The object data variable that is assigned to a property. For further information, see Object Data Variable.

Protocol access layer

Coding of access calls to and from the communication protocol (at present TCP/IP) to and from client and server.

PSB = program specification block

DL/I or IMS control block that describes databases and logical message destinations available for an application program. A PSB consists of one or more program communication blocks (PCBs).*

PU = physical unit

*SNA:*In Systems Network Architecture (SNA), a physical unit identifies a network node that supports communication sessions between logical units (LUs).

Q

No entries.

R

RABN = relative Adabas block number

RAD = rapid application development model

RBA = relative byte address

VSAM: The displacement in bytes of a stored record or control interval from the beginning of the storage space allocated to the dataset to which it belongs.*

Registry

A central repository for configuration data - database for configuration files. Physically, the Registry is the two files System.dat and User.dat. Logically, the Registry is the configuration data that you see in the Registry Editor. The Registry contains configuration information of all kinds for both hardware and software. For example, the registry contains information about DCOM classes and their assignment to servers. For further information, see your Microsoft documentation.

Related objects

Predict: Generic term for parent and child objects.

Relationship

Predict: See File Relation.

Report listing

Predict: Predict objects of type report listing are used to log transfer operations with the Predict Coordinator and conversion functions.

Reserved word

Part of the Natural programming language. Letter combinations not available to users for their own use.

See the topic Keywords/Reserved Words under Program Reference in the Natural Reference Manual.

Restrictions

Predict: Collection of keywords, owners and text strings used as selection criteria when retrieving information on objects. Restrictions can be stored in profiles or specified for temporary use.

Retrieval

Predict: Subsystem which provides selective output of information (objects, their attributes and associations) to the terminal or, in batch mode, to the spool.

Retrieval model

Predict: A retrieval model consists of two parts: a retrieval structure and a definition of the contents and the layout for the reports that are to be created

Retrieval operation

Predict: When retrieving information from the dictionary, a Retrieval type and an Output mode must be specified. These settings together determine the type of Retrieval operation that is indicated in the header of reports.

Retrieval type

Predict: The Retrieval type determines the type of information Predict to be retrieved from the dictionary. Retrieval types are either type-independent, for example Objects with children, or type-specific, for example Difference of files.

Rippling

Predict: The automatic updating of all derived fields at lower hierarchical levels when the corresponding field at a higher hierarchical level is modified.

The hierarchical levels are as follows:

- standard files
- master files
- userviews

See the topic Rippling under File in the Predefined Object Types in Predict documentation.

Roll server

OS/390: Natural as a server runs in a separate region or within the server subsystem region, for example for DB2 stored procedures. To run Natural as a server, a service-specific server stub is required. This server stub is supplied as part of the server product. It controls all service requests and is the only interface to the Natural server front-end.

See also Roll Server as described in the section Natural under OS/390 in the Natural Operations for Mainframes documentation.

Routine

Collective term for Natural object types which cannot be executed on their own such as, helproutine, subprogram, subroutine.

RPC = remote procedure call

A client/server communication technique that is applied to call applications, procedures and object methods on a remote computer through a network. The client sends a request to the server which provides the service. Request transmission is executed through client and server stubs.

See also Natural Remote Procedure Call.

RPC Stub

Natural RPC: The client subprogram via which the server subprogram is called. The RPC stub has the same name and contains the same parameters as the corresponding server subprogram.

The RPC stub accepts the CALLNAT requests on the client side, marshalls the Natural callnat parameters and passes them to the RPC client runtime. The RPC client runtime then passes the parameters to the client's EntireX Broker stub. For further information, see the topics Creating Stub Programs and Working with Automatic Natural RPC Execution in the Natural RPC documentation.

RRDS = relative-record dataset

VSAM: A dataset organization, in which records are of fixed length and are accessed by their relative record numbers (RRN).*

RRN = relative record number

VSAM: A unique identifier for each record stored in a relative record data set (RRDS).

RSL = record-sharing level

VSAM: An option that allows record-level sharing of VSAM data sets from multiple address spaces across multiple systems.

Runtime

1. The part of the Natural nucleus that executes a Natural program, as opposed to the compiler.
2. The time during which a Natural program is executed.

S

SAA = Systems Application Architecture

A set of common standards and procedures for working with IBM systems and data. SAA enables different software, hardware and network environments to coexist. It provides bases for designing and developing application programs that are consistent across different systems.*

SBCS = single-byte character set

A character set where each character is represented by one byte, as opposed to the double-byte character set (DBCS).

SCP = system control program

Mainframe: The Natural SCP environment is part of the Natural CICS Interface. A dump is taken for all SCP failures. See the topic Natural under CICS Abend Codes and Error Messages in the Messages and Codes documentation.

SDI =single-document interface

Selection criteria

Predict: Predict retrieval functions can be applied to individual objects or to groups of objects. Search criteria are specified to select objects to which retrieval functions are to be applied.

Selection window

Predict: See Active Help.

Server

Predict: Predict objects of type server are used together with objects of type node to document remote procedure calls.

Server front-end

OS/390: A component of the Natural Server environment used by NaturalX, the Natural DB2 Stored Procedures Server and the Natural Development Server. See . It is a functionally extended batch driver (NATOS, NATTSO) which provides the front-end server with additional functions such as initializing the server environment, session roll in/out and the execution of Natural objects.

Server name

Natural RPC: The name of the server on which the CALLNAT is to be executed.

With EntireX Broker, the server name is the name defined in the field SERVER in the EntireX Broker attribute file.

Server task

Natural RPC: A server task is a Natural task which offers services (subprograms). This is typically a batch task or asynchronous task. It is identified by a server name.

Service directory

Natural RPC: Contains information on which server provides which services (subprograms). The service directory can either be locally available on each client node or it can be located on a remote directory server, referenced by the RDS session parameter. Generated with the SYSRPC utility to implement the service directory.

The service directory is implemented by the Natural subprogram NATCLTGS which is generated by the SYSRPC utility.

Session

Natural: The user-dependent Natural runtime context required for the Natural runtime system to execute Natural programs for one individual user.

Session parameter

Assigned with the system command GLOBALS (or a SET GLOBALS statement) within the current Natural session. They override static and dynamic assignments.

Natural session parameters may be used with certain Natural statements to control such factors as the size of a report and how fields are to be displayed.

At the installation of Natural, the Natural administrator sets these parameters to default values which are then valid for all users of Natural.

For further information, see Session Parameters in the Natural Reference Manual.

To see which parameter values apply to your session, enter the system command GLOBALS as described in the Natural User's Guide.

Session variable

Predict: With many Predict functions, parameter values must be specified. Predict stores parameter values temporarily in session variables. Whenever possible, parameter values that have been omitted are taken from these session variables. Which parameters values can be taken from session variables depends on both the function and the parameter type.

Shared nucleus

OS/390 and VSE/ESA operating systems: The environment-independent part of the Natural nucleus installed so that one copy of the nucleus can be used by several TP-dependent Natural drivers and in batch mode.

Single-master view

Predict: A view which is always derived from one master file only, for example an Adabas userview.

Single Point of Development

Windows: The concept of platform-independent development realized with Natural 5 for Windows. Natural 5 focuses on the following:

- remote development of OS/390 applications with Natural Studio;
- advanced web and XML capabilities featuring an XML toolkit and direct access from Natural to any resource in the Internet.

SIP = session information pool

Holds the Natural session information records and is used in connection with the Authorized Services Manager (ASM).

SIR = session information record (Natural)/session information retrieval (IBM)

Natural: The Natural CICS interface permanently holds information about all active Natural sessions. A session information record (SIR) is maintained for each session.

IBM: The function that allows an operator to enable or disable session information retrieval for a particular gateway or for all gateway sessions. When a gateway session ends, trace information about the most recent sequence or FID0 numbers to cross the gateway is passed back to all system services control points (SSCPs) that have enabled SIR for that session or for all sessions. This information can also be passed back to the requesting host.*

SIT = system initialization table

A CICS table that contains information to initialize and control system functions, module suffixes for selection of user-specified versions of CICS modules and tables, and information used to control the initialization process. You can generate several SITs, using the resource definition macro DFHSIT, and then use the SIT system initialization parameter to select the one that best meets your current requirements at initialization time.*

SMA = System Maintenance Aid

See System Maintenance Aid.

SMF = system management facility

A standard feature of OS/390 that collects and records a variety of system and job-related information.*

SNA = Systems Network Architecture

The IBM architecture that defines the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks. The layered structure of SNA allows the ultimate origins and destinations of information (the users) to be independent of and unaffected by the specific SNA network services and facilities that are used for information exchange.*

SOAP = Simple Object Access Protocol

XML-based messaging convention which, in combination with the EntireX XML Wrapper, enables any Natural application to be initiated by an XML document sent via HTTP.

Software AG Editor

Mainframe: You can use the Software AG Editor as an alternative to the Natural program editor. You need to have Natural ISPF installed and to set your editor profile appropriately (see your Natural User’s Guide for further information on editor profiles).

Source field

Predict: Field that is used in the definition of a derived field. Derived fields are super/ hyper/subfields/descriptors and phonetic descriptors.

SPA = scratch pad area

IMS/TM: A terminal-specific area to temporarily store data processed during user transactions. A program controls clearance of the area.

SPoD

See Single Point of Development.

SQL = Structured Query Language

A programming language that is used to define and manipulate data in a relational database.*

SSA = segment search argument

IMS or DL/I: The part of a DL/I call that identifies a segment or group of segments to be processed. SSAs may be simple segment names or they may be qualified to include constraints on the values of fields within the named segment types.*

Standard field

Predict: A field in a standard file. Standard files and fields enforce standard use of fields in different files.

Standard file

Predict: A standard file documents the overall layout of all data processed within an organization (data definitions and/or company standards).
Fields in standard files do not refer to an implemented data structure directly: field definitions in a standard file are rippled to master files of different types.
See Rippling.

Statements

See the Statements Manual.

Static parameter

Mainframe: Assigned by profile parameters specified in the macro NTPRM and other macros of the Natural parameter module (NATPARM) which is then assembled and linked with the Natural nucleus. All parameters not specified are assigned to their default values.

Open Systems: The parameter settings specified in NATPARM.SAG.

Steplib

A steplib is a library in which Natural searches if an object is not found in the current library. You can define a search path of up to 8 steplibs in addition to the default steplib unless you are running mainframe Natural without Natural Security. The default steplib is only searched if an object is not found in the libraries defined in the steplib list. The default steplib definition is taken from the *STEPLIB system variable.

No Natural Security:

Mainframe: The system variable *STEPLIB contains the name of the steplib determined by the STEPLIB profile parameter. The default value is SYSTEM. Only one steplib definition is possible.

Windows/Open Systems: You can define a list of up to 8 libraries in the NATPARM file. The system variable *STEPLIB contains the library determined by the LSTEP profile parameter . For further information, see STEPLIB-Default Steplib Library and LSTEP in the section Profile Parameters, and *STEPLIB in the section System Variables, all in the Natural Reference Manual.

Under Natural Security:

All platforms: The system administrator defines up to 8 steplibs in the steplib table in the security profile of each library, plus a value for the Natural system variable *STEPLIB for each library. The entries in the library profile override any definitions made outside Natural Security. For further information, see the section Library Maintenance/Components of a Library Profile/Additional Options in the Natural Security documentation.

Predict : Predict supports the steplib concept with active retrieval functions using the Library Structure parameter and with the NATURAL LISTXREF utility.

NOTE: If the profile parameter BPSFI (Search First in Buffer Pool) is set, the buffer pool is searched before any steplibs.

Storagespace

Predict: Predict objects of type storagespace document DB2 storagegroups.

Stub

A socket program that establishes the link between the local application program and the broker. See also RPC stub.

Super Natural

Software AG's end-user tool for extracting and processing data from mainframe or PC files. It offers menu-driven query specification, interactive report layout specification, and flexible customization of end-user profiles.

SVC = supervisor call

A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system from inappropriate user entry. All operating system requests must be handled by SVCs.*

Syncpoint = synchronization point

CICS and IMS/TM: A logical point in execution of an application program where the changes made to the databases by the program are consistent and complete and can be committed to the database. The output, which has been held up to that point, is sent to its destination(s), the input is removed from the message queues, and the database updates are made available other applications.*

SYSPARM utility

Mainframe: Used for creating and maintaining parameter profiles. You can specify a string of profile parameters once, store this string under a profile name, and then invoke NATURAL with the dynamic parameter PROFILE=*profile-name*. The string of parameters stored under that profile name is passed to NATURAL as dynamic parameters.

Sysplex = system complex

OS/390 operating systems: A coupling of several OS/390 operating system images to improve performance, balance workload and to guarantee system availability.

SYSRPC

Utility for configuring the services, and server connections for each Natural client using remote procedure calls. See your SYSRPC Utility documentation.

System

Predict: Predict objects of type system document a collection of programs forming an application or a part of an application.

System command

Natural command.

System file

The Natural system files (FNAT, FUSER) contain information, data programs, modules, etc., which are required for the Natural system to function. Products like Predict, Natural Security, Natural Advanced Facilities and Natural for VSAM require their own system files (FDIC, FSEC, FSPOOL, FDICX).

System function

Preprogrammed functions offered by Natural. See the topic System Function under Program Reference in the Natural Reference documentation.

System library

Natural-internal library created in FNAT at installation, not available for customer-modification. All Natural system library names start with the letters 'SYS' (with some exceptions on the mainframe).

SYSTEM library

The library which is searched if a Natural object is not found in either the current library or in the steplibs. There is a SYSTEM library in both FNAT and FUSER. See steplib.

System Maintenance Aid (SMA)

Software AG product used to install and maintain Software AG mainframe products.

System Management Hub

Windows: Provides information on all domain-wide Natural and Natural add-on installations including the following:

- version information;
- current update status for mainframe Natural (IUPDs and zaps);
- activity status for Natural servers.

You can start and stop Natural servers from System Management Hub.

System program

Predict: Programs that are not available as source code are documented with Predict objects of type Program with subtye E (external object) and language Z (system program). Whenever a system program is created in Predict, Xref data is written for it.

System variable

System variables are used to display system information. They may be referenced at any point within a Natural program. See the topic System Variables under Programming Reference in the Natural Reference Manual.

Subtype

Predict: Object types can have subtypes. The object type file, for example, has the subtypes Adabas file, Adabas userview, DB2 table, DB2 view, etc.
The subtypes of the object type file, for example, are also called file types.

T

TAC = transaction code

Task

Mainframe: In a multiprogramming or multiprocessing environment, one or more sequences of instructions treated by a control program as an element of work to be accomplished by a computer. *

Open Systems: See process.

TCB = task control block

OS/390 and VSE/ESA: A control block allocated by the operating system which contains all information on tasks relevant for the system.

TD = transient data

CICS: Data temporarily stored in a facility. A transient object is automatically deleted when it is no longer used.

Terminal command

With terminal commands you can perform a wide variety of special-purpose functions. The first character of a terminal command is the terminal command control character, which identifies the command as a terminal command. By default, the terminal command control character is "%". You can define another special character as control character using the session parameter CF. See Terminal Commands.

Thread

Mainframe: A storage space which contains all the data for a particular Natural session.

Open Systems: The basic (memory) entity within an application to which the operating system allocates CPU time. Threads allow parallel computing in single and multiple processors. They execute independently from each other.

TIAM = Terminal Interactive Access Method

BS2000/OSD operating systems: A teleprocessing access method for online environments.

TP monitor = teleprocessing monitor/transaction processing monitor

OS/390 and VSE/ESA: A control program for the administration and management of online transaction processing (OLTP) applications. TP monitor technology complements the operating system and serves as an intermediate tier encapsulating access to resources. The user or application programmer is thus shielded from technical details on the operating system level, for example concerning database access.

Transfer medium

Predict: When data is transferred using the Predict Coordinator, the transfer medium used can be a PC workfile, a Natural workfile or a file in a database.
For the Coordinator functions Unload and Export, the transfer medium is the target environment; for the Coordinator functions Load and Import, the transfer medium is the source environment.

Transaction

1. Input of application data submitted by a single user that initiates a sequence of information exchange and execution of operational steps (input - data processing - output). A transaction code is needed to initiate the process.

2. Natural performs database updating operations based on transactions (database transactions), which means that all database update requests are processed in logical transaction units. A logical transaction is the smallest unit of work (as defined by user) which must be performed in its entirety to ensure that the information contained in the database is logically consistent. The statements END TRANSACTION (ET) and BACKOUT TRANSACTION (BT) cause the database to unlock all records since the begin of the transaction. See also Database Access in the Natural Programming Guide.

Translator database

Predict: Database that contains the ADASTAR translation table that is used to determine the physical file behind any logical file number when using Adabas Star.

Tree view

Visual representation of element hierarchy.

U

UCB = unit control block user

Unload

Predict: There are two methods of unloading Predict objects:

- Using extracts. Using the menu functions, you can only unload objects that are contained in an extract. Up to ten extracts can be specified for one unload operation. For more information see the section Extract in the Predefined Object Types Predict documentation.
- Using unload commands. In the command line you can also specify individual objects or ranges of objects. The scope of the function can be limited by parameters. See the Overview of Command Keywords in the Predict documentation.

User

Predict: Predict objects of type user document persons using a system. A logical connection between users and documentation objects is established by means of owners. See Object types.

User-defined variable

A field which you define yourself in a program. It is used to store values or intermediate results obtained at some point in program processing for additional processing or display.

You define a user-defined variable by specifying its name and its format/length in the DEFINE DATA statement. See the topic User-Defined Variables in the Programming Guide.

Userview

Predict: Userviews are logical views of master files defined for use in the data declaration sections of programs. The number and sequence of fields in a userview can differ from the master files and - within certain compatibility rules - certain attributes of fields in userviews can differ from the corresponding values at the physical/logical level.

UTM = Universal Transaction Monitor

Obsolete. Replaced by Open UTM.

V

Variable

See System variable and User-defined variable.

Verification

Predict: A Predict object of type verification documents the rules for the validation of field values. Natural processing rules can be generated from Predict objects of type verification.

View

Predict: See Userview.

Virtual machine

Predict: Together with objects of type Network, Predict objects of type Virtual Machine document the hardware and operating system environment of a data processing system.

VM = Virtual Machine

1. A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system.*
2. In VM/ESA, the virtual processors, virtual storage, virtual devices, and virtual channel subsystem allocated to a single user. A virtual machine also includes any expanded storage dedicated to it.*

VM/CMS = Virtual Machine/Conversational Monitor System

An IBM system that integrates CMS in VM environments to accommodate a high number of interactive users.

VM/ESA = Virtual Machine/Enterprise Systems Architecture

An IBM licensed program that manages the resources of a single computer so that multiple computing systems appear to exist. Each virtual machine is the functional equivalent of a real machine.*

VM/SP = Virtual Machine/System Product

The IBM operating system VM/SP supplies a virtual machine to each logged-on user.*

VSAM = Virtual Storage Access Method

An IBM access method to maintain records of different dataset organizations: key-sequenced datasets (KSDS), entry-sequenced datasets (ESDS) or relative-record datasets (RRDS).

VTAM = Virtual Telecommunications Access Method

An application programming interface (API) for communicating with Systems Network Architecture (SNA) telecommunication devices and their users.

W

WTO = write-to-operator

An optional user-coded service that allows a message to be written to the system console operator informing the operator of errors and unusual system conditions that may need to be corrected.*

X

XCF = Cross-systems Coupling Facility

A facility of MVS/ESA SP 4.1 that provides some initial MVS services needed to support a multisystem environment while still maintaining a single system image. Systems coupled using XCF are known as a Sysplex.*

XML = Extensible Markup Language

XML Toolkit

Windows: Enables developers to process XML documents within Natural. The toolkit includes a wizard which generates Natural source code and provides the following features:

- Mapping Natural data definitions to DTDs;
- Serialization;
- Mapping DTDs to Natural data definitions;
- Parsing an XML file and assigning its contents to a Natural data structure.

Xref data = active cross-references

Predict: Xref data is stored in Predict for implemented objects; it is stored independent of documentation objects. Predict's active retrieval functions retrieve information from Xref data and from Predict documentation objects to determine

- whether objects documented in the dictionary are not yet implemented,
- whether implemented members are not yet documented or
- whether documentation data differs from the implementation.

See LIST XREF for Natural in the Predict Reference documentation for more information.

Xref data records for Natural objects are created by Natural when a Natural object is cataloged. Xref data is generated when a programming object is cataloged and the Xref parameter has been specified accordingly. For further information, see your Natural User's Guide, Natural Operations documentation and/or the Predict documentation.

XRef GUI Client

Windows: The XRef GUI Client Plug-In is used to navigate through cross-reference information created during CAT or STOW commands in the development server file. The information is displayed in a tree view in Natural Studio. Both types of references - active and passive (i.e. referencing and referenced) can be displayed. Navigating through the hierarchies of active and passive references is possible within the tree-view. See the section XRef GUI Client - Overview in your Remote Development documentation.

Y

No entries.

Z

Zap

A product error correction for changing the contents of an executable module at a specified address. Known as a patch in IBM terminology.

